United States Department of Agriculture

Cold Elk Range Analysis

Draft Environmental Assessment

Forest Service
Wallowa-Whitman National Forest,
Wallowa Valley Ranger District and
Hells Canyon National Recreation Area

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For More Information Contact:

Shawn Mork
Wallowa Mountains Office
Wallowa-Whitman National Forest
PO Box 905
Joseph, OR 97846
Phone: 541-426-5546
Email: shawn.mork@usda.gov

Introduction

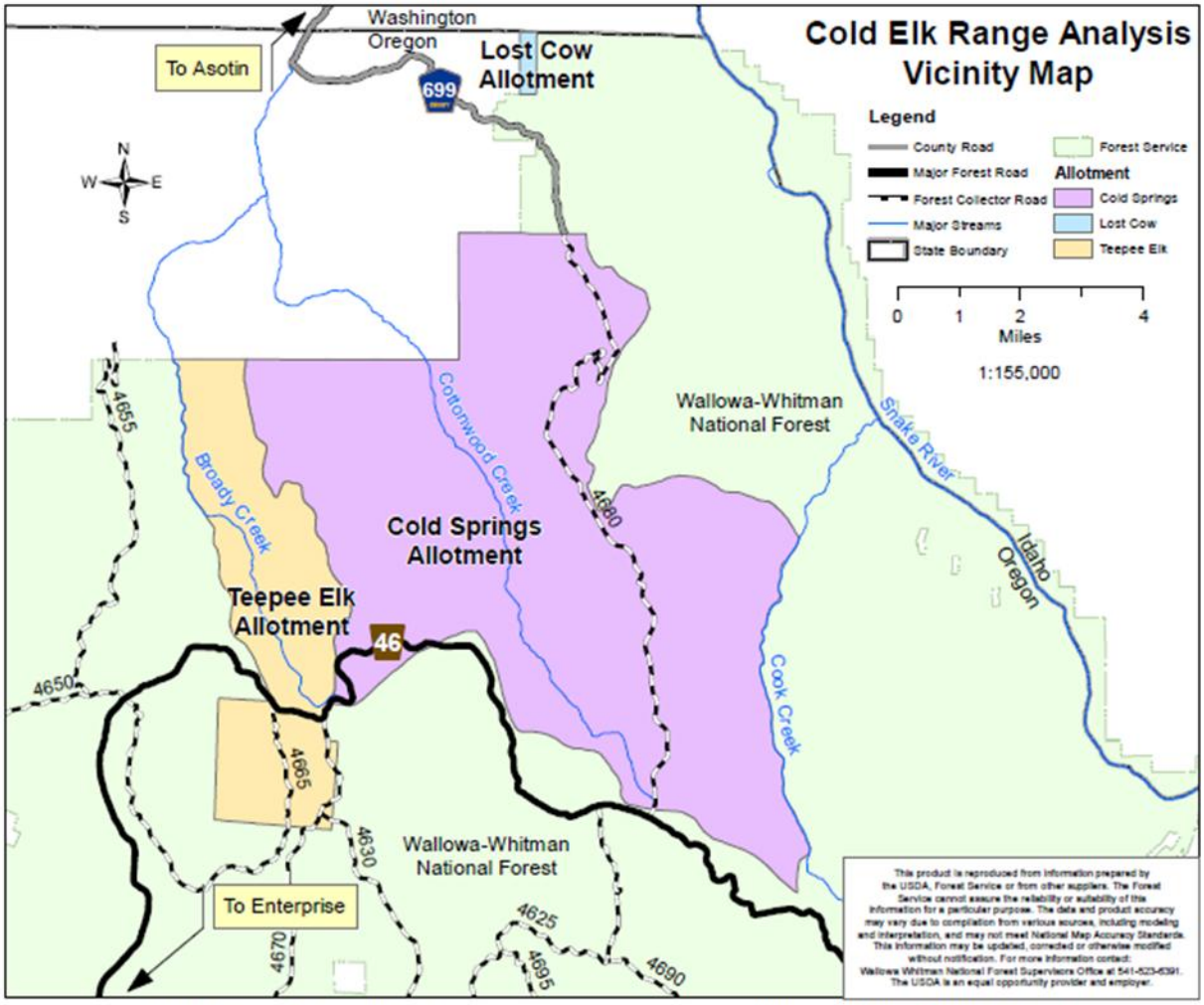
The Forest Service is proposing to continue authorization of livestock grazing on two (Cold Springs and Tepee Elk) of the three allotments within the Cold Elk Range Analysis area (Figure 1). A third allotment, Lost Cow, is proposed to be closed to grazing. These actions are proposed to be implemented on the Wallowa Valley Ranger District and Hells Canyon National Recreation Area of the Wallowa-Whitman National Forest.

We prepared this draft environmental assessment (EA) to determine whether to prepare an environmental impact statement or a finding of no significant impact.

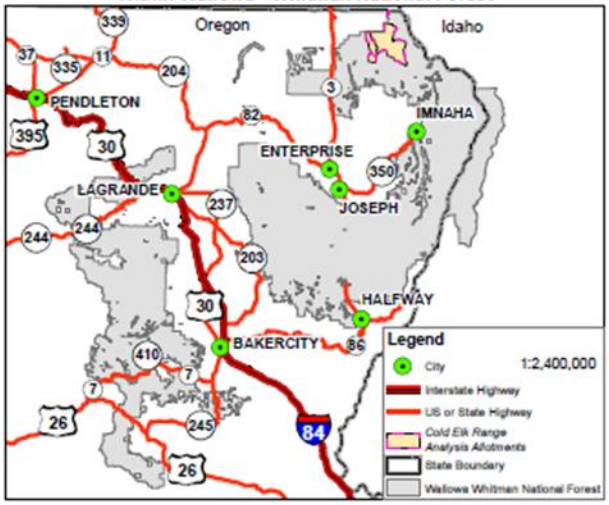
The Cold Elk Range Analysis (CERA) area is located in Wallowa County approximately 48 miles north of Enterprise, Oregon and encompasses 38,800 acres of National Forest System lands. The project area is within lands ceded by the Nez Perce[1] tribe in 1863.

In accordance with 40 CFR 1508.9(a) this draft EA was developed as a "concise public document". For additional detail about the project visit http://www.fs.usda.gov/project/?project=54613

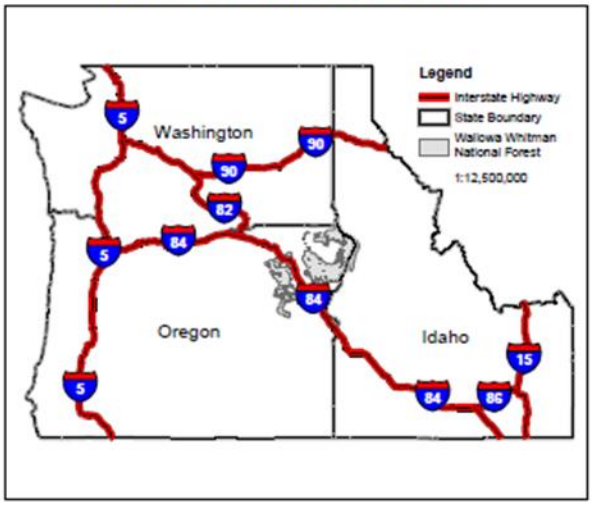
[1] http://www.critfc.org/member_tribes_overview/nez-perce-tribe/treaty-with-the-nez-perces-1855/



Cold Elk Range Analysis Allotments Within Wallowa - Whitman National Forest



Wallowa - Whitman National Forest Location Within Pacific Northwest States



Management History

Livestock grazing has been managed by the Forest Service on these allotments since the establishment of the Imnaha Forest Reserve in 1907, followed by the establishment of the Wallowa National Forest in 1908. In 1918, the Forest Service instituted a permit system, which defined areas to be grazed, set the season of use, and established the number of livestock to be permitted. During the early part of the last century, the Forest Service took action to regulate numbers and to establish workable grazing seasons and allotments. Prior to this time grazing was essentially unregulated and there were areas that demonstrated detrimental impacts (2005, Williams and Melville, The History of Grazing in Wallowa County).

In the latter half of the century emphasis shifted to development of management systems and regulation of effects on specific resources. Improved grazing systems and pasture designs were implemented to accelerate recovery in the late-1970s to the present. Specific changes included construction of fences, installation of water tanks and ponds, herding, and strategic salt placement to improve livestock distribution while reducing impacts on rangeland resources. Additionally, the allotment and pasture boundaries in the project planning area had been adjusted over 20 years ago (2210 Allotment Files for Tepee Elk, Cold Springs, and Lost Cow Allotments).

The current level of permitted grazing on the National Forest System lands within the CERA project area is at the lowest number of livestock in recorded history. This has allowed the rangeland resource in the area to recover from past management activities (2005, Williams and Melville, The History of Grazing in Wallowa County).

Need for the Proposal

The Multiple-Use Sustained-Yield Act of 1960 states "It is the policy of Congress that the National Forests are established and shall be administered for outdoor recreation, range, timber, watershed, wildlife and fish purposes".

Our policy in the Forest Service is to contribute to the economic and social well-being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on rangeland resources for their livelihood (Forest Service Manual 2202.1)

The Wallowa-Whitman National Forest Plan (1990) states: "Range ecosystems are to be managed to ensure that the basic needs of the forage and soil resources are met. Forage production, above that needed for maintenance or improvement of the basic resources, is to be made available to wildlife and permitted domestic livestock under the standards and guidelines that will assure continued maintenance or improvement of the resource."

This proposal is needed to evaluate continuation or modification to permitted livestock grazing on all or portions of the CERA area, as required under the Rescission Act of 1995. Monitoring of the rangeland conditions indicate that the majority of the rangeland resources are within or moving

toward desired conditions. However, there are three pastures and two riparian areas (estimated to be 16% of the project area) where resource conditions could be improved to help meet desired conditions. The need is to update the grazing strategies in these few areas so that this activity better meets or moves toward Forest Plan and project-specific desired conditions. The proposed action is discussed in detail under the Alternatives section of this document.

Existing Condition

The Forest Service has been managing National Forest System rangelands for over a century, and has a strong understanding of grazing practices that can protect rangeland resources. Management and rangeland conditions of the CERA project area are similar to grazing activities on many other public rangelands on the Wallowa-Whitman National Forest and throughout NE Oregon. The possible resource effects, and effectiveness of mitigations measures to minimize those effects are well known and documented based on monitoring. See Range Report at page 9-16.

The majority of the rangeland and aquatic resources in the CERA area are in good condition, and monitoring data indicate an overall improving trend (refer to the Aquatics and Range Reports). The Issue section describes pastures needing improved resource conditions. This monitoring includes measuring multiple indicators of soils, plants, and riparian conditions. Field observations by range and aquatic specialists determined that undesired impacts are primarily from historic and current grazing activities. Other impacted areas are located immediately adjacent to water sources where cattle gather. These impact areas are small areas (usually less than 1 acre) of exposed and/or compacted soils.

Additional information on existing resource conditions can be found under the Environmental Impacts and individual resource reports available within the project record.

Desired Future Condition

Project-wide desired future conditions (DFC) for the CERA area are based on guidance from the Forest Plan and Hells Canyon National Recreation Area (HCNRA) Comprehensive Management Plan (CMP) objectives:

- *Continue recreation, livestock grazing, timber harvest, and mining as traditional and valid uses of the HCNRA, compatible with sections 7 and 13 of the HCNRA Act (*CMP. C-6).
- Manage range vegetation at levels that meet the basic needs of the plant and soils, the forage needs for wildlife at management objective population levels, and provide forage for permitted domestic livestock (Forest Plan 4-4).
- Continue contributions to the economic and social well-being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood (FSM 2202.1).

- Meet riparian resource management standards (Forest Plan 4-97).

- Manage livestock grazing within forested stands to ensure ecological function and sustainability of understory vegetation consistent with management of overstory vegetation objectives. Use grazing-related standards and guidelines to manage grazed forested understory vegetation (CMP C-35).

- Manage grassland vegetation to ensure continued ecological function and sustainability of native ecosystems (CMP C-44).

- Manage rangeland to move towards satisfactory conditions (Forest Plan 4-82).

Issues

The issues are tied to five specific locations, and project design would be to focus changes in the grazing strategy at these locations to improve resource conditions.

- *Elk Pasture* – This pasture, located in the Teepee Elk Allotment, has one location (the pasture is approximately 2,400 acres, six percent of the CERA project area) that is assessed as unsatisfactory due to long term plant community monitoring with poor conditions and a downward trend. The reason for the unsatisfactory condition is due to a decline of bunchgrass cover and mountain brome in the scabland.
- *Horse Creek Pasture*- This pasture, located in the Cold Springs Allotment, has one location (the pasture is approximately 635 acres, less than two percent of the CERA project area) that is assessed as unsatisfactory due to long term plant community monitoring with a fair and downward trend. The reason for the unsatisfactory condition is due to a decline in bunchgrass cover and an increase in non-native wheatgrasses.
- *South Cold Spring Pasture* – This pasture, located in the Cold Springs Allotment, has several locations (the pasture is approximately 3,200 acres, eight percent of the CERA project area) that are assessed as unsatisfactory due to long term plant community monitoring with a fair and stable trend. The reason for the unsatisfactory condition is due to a decline in shrub and bunchgrass cover and an increase in non-native wheatgrasses.
- *Peavine Creek* – This stream is located in the Elk Pasture of Teepee Elk Allotment and has monitoring locations where stream bank stability, due to hoof shear from cattle, is below the desired standard of 90% of the bank [2] as stable.
- *Cottonwood Creek* – This stream is located in the Lower Cottonwood pasture of the Cold Spring Allotment, and much of the stream reach is eroded due to a spring flood and debris flow event in 2017 which resulted in extensive scour and loss of riparian vegetation. The DFC is to restore riparian areas, by resting the area for up to five years.

[2] Streambank stability indicates a bank's resistance to disturbance and its resilience to recover, and is determined by the soil composition and erosion of the bank and the type, amount, and vigor of vegetative cover.

Other Resource Concerns – A couple of commenters shared an array of resource conditions that they felt could be affected by grazing, such as threaten and endangered plants and fish, invasive species, wildlife, streams, springs and wetlands. The Forest Service considered each of these comments, and reviewed monitoring results from the project area to determine if the condition of concern was present or occurring at a level that may be potentially significant.

In some cases the comment was asking the Forest Service to conduct analyses that are beyond the scope of this project, or we determined the proposed analyses would not contribute meaningfully to informing the Forest Service on whether to continue grazing within the project area, such as effects of grazing on fire and fuels, or the hazards to the public from cattle on National Forest System lands. See comment letters and comment consideration on project website.

Other concerns were about perceived resource impacts from *any* amount of grazing activity, which will be addressed under the No Grazing Alternative, or that grazing is not appropriate within the Hells Canyon National Recreation Area. To address these concerns, the Forest Service assessed whether the proposed action was consistent with the Forest Plan and the CMP, which is documented toward the end of the draft EA.

Proposed Action and Alternatives

Alternative 1 – No Grazing

Under Alternative 1 grazing would not be reauthorized on any of the allotments eliminating livestock grazing from 38,800 acres of National Forest System lands. Developments built to facilitate livestock management, including allotment and pasture fences, livestock exclosures, and stock water ponds and water troughs would be abandoned. Maintenance of allotment boundary fences would be assigned to the adjacent permittee. The current permit holders would be notified that their term grazing permits would be cancelled after two years (36 CFR 222.4(a)(1)). During the two years prior to cancellation of the permits, livestock would continue to be managed under those permits

This alternative would address the comments relating to concerns about impacts from grazing on rangeland resources by eliminating all grazing-related impacts from the allotment.

Alternative 2 - Proposed Action

The Forest Service is proposing to authorize cattle and horse grazing within the Cold Spring and Teepee Elk Allotments of the CERA project area, and to close the Lost Cow Allotment (Table 1). Current management, including stocking level, timing and intensity, was derived from assessing the results of grazing on rangeland resources, and making adjustments to improve the grazing strategies. The primary change under the proposed action from the current grazing strategy is 1) a reduction in the grazing season from six months to five months, 2) a reduction in the utilization standard in three pastures with unsatisfactory locations, 3) and the addition of deferment, rest and fencing to further protect resources.

Table 1. Grazing Strategy under the Proposed Action

Allotment	Acres (National Forest lands)	Permitted Head Months	Estimated number of animals	Grazing season
Cold Spring	30,405	2165 cattle 24 horse	433 cow/calves 4 horses	June 1 – Oct 31
Teepee Elk	7,600	880 cattle 24 horse	175 cow/calves 4 horse	June 1 – Oct 31
Lost Cow	200	No Grazing Authorized		

Specific actions within each allotment include:

Cold Spring Allotment

- Construct new fence- Around the perimeter of Dougherty Campground to exclude grazing and reduce impacts to recreation resources.
- Season of use- All pastures available for use from June to October except the Upper and Lower Cottonwood Pastures which would be available for use from July 1 to October 31.
- Rest[3]- Grazing will not be authorized in Lower Cottonwood pasture of Cold Spring Allotment for up to five years, then evaluate condition to allow for stream and riparian recovery from 2017 debris flow. Allow grazing when condition has recovered to satisfacorty condition or after 5 years of rest.
- Rest – Grazing will not be authorized in Upper Cottonwood pasture every other year to allow for continuing recovery of riparian vegetation from the effects of the 1988 Teepee Fire.
- Defer[4]- Grazing will not be authorized in spring use pastures (June 1st –June 30th), every third year, to allow bunchgrasses to grow seed.

Teepee Elk Allotment

- Construct new fence – Exclude cattle from grazing within the riparian area of Peavine Creek of Elk Pasture to protect steelhead habitat. Water gaps would be provided approximately each ½ mile at naturally hardened areas and where suitable spawning substrate is not present. This action would enclose about 1.5 miles (60 acres) of Peavine Creek.
- Season of use- All pastures would be available for use from June through October, except the Elk Pasture would be available for use from July 1 to October 31 until the riparian fencing is completed and then would be available again from June through October.
- Defer pastures- grazed in June every third year.

Lost Cow Allotment

- Close the allotment to grazing - There is currently no grazing on this allotment, though the allotment is "open" and available to be authorized for grazing. However, limited acreage and absence of water and range improvements limit the allotment's potential for a successful grazing operation. "Closing" the allotment would remove these lands from the Forest's grazing lands.

[3] For this project rest is being applied as no grazing for 1 year in the Upper Cottonwood pasture and at least one year, but up to five years in the Lower Cottonwood pasture.

[4] For this project deferment is being applied as no grazing from June 1st to the 30th of June, one year out of three for pastures that are graze in June to allow bunchgrasses to grow seed.

Alternative 3 – Increased Head Months

Alternative 3 was developed in response to interest by some commenters to increase the current amount of grazing on Cold Spring Allotment, and to keep Lost Cow Allotment open for grazing.

Table 2. Grazing Strategy under the Alternative 3

Allotment	Acres (National Forest Lands)	Permitted Head Months	Estimated number of animals	Grazing season
Cold Spring	30,405	3000 cattle 24 horse	500 cow/calves 24 horses	June 1 – Nov 31
Teepee Elk	7,600	880 cattle 24 horse	175 cow/calves 4 horse	June 1 – Oct 31
Lost Cow	200	16	2	Nov 1 – May 31

This alternative proposes to increase the number of head months authorized to graze the Cold Spring Allotment and continues to authorize grazing on the Lost Cow Allotment (Table 2). All design criteria, mitigation and monitoring discussed in Alternative 2 would be the same, except for the following:

Cold Spring Allotment

- Increased cattle to 3,000 head months from June 1 to November 31.

Lost Cow Allotment

- The allotment would remain active (no change from the current condition). Authorized use would be 16 head months of grazing with cows or cow/calf pairs between November 1 to May 31

Teepee Elk Allotment same as Alternative 2.

Monitoring

Under Alternative 1 there would be no gazing and therefore no monitoring.

Monitoring would be the same for both Alternative 2 and 3. Monitoring is a way of assessing whether grazing practices are helping the area move towards desired resource conditions. Decisions to change grazing management and the direction that the change should take are based upon the results of monitoring. Monitoring is primarily addressed within the specific management under Alternative 2.

Riparian Monitoring

A combination of greenline[5] stubble height, streambank alteration, and shrub browse will be used to assess the use of riparian areas by livestock. These measurements are collectively known as annual use indicators when completed at the end of the livestock grazing use period. This

[5] Greenline is a way to observe and measure the vegetation that is most critical to maintaining stream channel stability (Aquatics BA page 70).

effectiveness monitoring will assess stream habitat conditions and be used to identify future management. This monitoring strategy is based on those areas where known Endangered Species Act (ESA) listed fish spawning overlaps with livestock grazing. Forest Service personnel will determine when and where annual monitoring will occur. For those pastures without the presence of ESA listed fish spawning, but have designated critical habitat, the Forest Service will conduct monitoring mid-season once every 3-5 years on a rotating basis. See Range report at 42-44 and Aquatics BA at 29-33.

Alternatives Considered but Eliminated from Detailed Study

Reduce the amount of authorized grazing to a level between the Proposed Action and No Grazing. A comment recommended adding another alternative with less head months than in Alternative 2 but more than Alternative 1. This proposal was not analyzed in detail because the proponent did not offer any specific information for this alternative, such as head months or areas to eliminate or add grazing. In addition, the comments from the proponent expressed concerns about any amount of grazing, so the No Grazing Alternative would adequately address this input.

Environmental Impacts

The analysis of environmental impacts focuses on changes to resource conditions in the issue areas of Elk Pasture, Horse Creek Pasture, South Cold Spring Pasture, Peavine Creek, and Cottonwood Creek, and how these conditions were predicted to differ between alternatives. These five locations are where a change in grazing strategy would be needed to meet the DFCs discussed previously in the draft EA.

The overall rangeland resource condition in the project area was determined to be good, based on monitoring results, and observations of conditions by resource experts during administrative activities. The effects from current grazing activities to resource conditions in the majority of the project area, outside of the issue areas, are consistent with the Forest Plan and CMP (see the Consistency section of this draft EA).

Effects are also addressed for the rangeland, invasive weeds, aquatic and riparian, botany, wildlife, heritage, and rural economy and culture.

Rangeland Condition

Each of the three unsatisfactory pastures, Elk, Horse Creek and South Cold Spring are due to the fair or poor condition of rangeland vegetation (refer to the issue statements on pages 5-6 for a description of the unsatisfactory vegetation condition). Elk and Horse Creek pastures each have one location, and South Cold Spring pasture has two locations where resource conditions were rated as unsatisfactory (Range report).

Effects

Project design criteria of deferment and reduced utilization rates will move these locations towards satisfactory conditions. When a pasture is deferred it allows bunch grasses to grow seed, which is the primary means for new bunchgrasses to grow. In addition to deferment, the utilization levels in the Elk and Horse Creek pastures for upland grasses would be reduced from

55% to 35%. In South Cold Spring pasture the utilization level for upland shrubs would be reduced from 40% to 30%.

Alternatives 1, 2 and 3 will all move toward satisfactory condition, but with different rates or within different time frames. Grazing standards, utilization rates and mitigation measures are the same for Alternatives 2 and 3.

Under Alternative 1 the pastures would not be grazed by cattle and the location with unsatisfactory conditions would be left to recover. It is expected recovery under Alternative 1 would move quickly towards satisfactory conditions. Rangeland conditions may still be affected by natural disturbance events, including wildlife grazing and wildfires.

Under Alternative 2 and 3 there would continue to be grazing in in the unsatisfactory pastures and the project design criteria of deferment and reduced utilization rates described above are expected to increase the recovery of these locations at a quicker rate than under current conditions. Alternative 2 would move towards satisfactory conditions, although not as quickly as Alternative 1. Alternative 3 also moves towards satisfactory conditions, but at a slower rate than Alternative 1 and 2 due to increased cattle number and the risk of impacts associated with more cattle (Alternative 3 has a 40 percent increase in cattle use from the current condition, and Alternative

2.)

Cumulative Effects

Since there would be no direct or indirect effects from the proposed activities under Alternative 1, there would be no cumulative effects.

Cumulative effects for Alternative 2 and 3 would be similar. Although, under Alternative 3 effects will extend to the Lost Cow Allotment and may have increased intensity on the Cold Spring Allotment because of the increase in head months and the longer grazing season when compared with Alternative 2.

Past actions that may contribute to cumulative effects to rangeland conditions in the analysis area include timber harvest, prescribed fire, invasive weed introduction and treatments, construction and maintenance of roads, recreation, and grazing within the project area and on adjacent land.

Present management activities on the analysis area include Lower Joseph Creek Restoration Project activities, road maintenance and recreation activities. Timber harvest within the project area is not anticipated to impact rangeland. Prescribed fire activities may require resting portions of pasture treated. Prescribed fire can improve native rangeland vegetation conditions. Road maintenance and recreation activities are unlikely to result in cumulative effects with proposed livestock grazing activities due to the limited nature of these activities on the allotment.

Foreseeable activities proposed for National Forest System lands on the analysis area are the continuation of road maintenance and dispersed recreation activities. Impacts from these activities are likely to be similar to current activities. Therefore, there is a low risk of cumulative effects with the proposed livestock grazing.

Invasive Weeds

Livestock grazing and movement of cattle can affect the spread of invasive weeds by removing vegetation and exposing soils. Movement of livestock can introduce invasive plants species to

new areas causing new infestations within and adjacent to the project area. Livestock grazing and movement can also spread seeds, increase the size of existing infestation sites, and cause an increase in affected acres.

Effects

Under Alternative 1, with no livestock removing vegetation (exposing soils) and no cattle acting as transport for weed seeds, the risk for introduction and spread of invasive weeds would be lowered. However, since there would be very little Forest Service presence or program resources in support of rangeland management, there would be a reduction in the ability to detect or treat weeds.

Alternative 2 will have a potential for the introduction and spread of invasive weeds due to the location of proposed grazing areas and the proximity to existing infestations. Cattle would continue to impact invasive weed sites occupied by species vulnerable to being spread by livestock. Alternative 2 is estimated to have a greater risk of establishment and spread of invasive weeds than under alternative 1. However, design criteria for the proposed action will assist in early detection and treatment of current known sites and any new infestation sites. Design criteria proposed for Alternative 2 to assist in control of invasive weeds includes early identification of new infestation sites, treatment at known sites, and implementation of an authorized treatment plan.

Alternative 3 may have an increased risk for the introduction and spread of invasive weeds. Alternative 3 effects may have increased intensity on the Cold Spring Allotment because of additional head months and longer grazing season. The Lost Cow Allotment would not be closed, thus noxious weed impacts would occur.

Cumulative Effects

Under Alternative 1, there would be no grazing, however there is still a risk of for introduction and spread of invasive weeds.

Cumulative effects for Alternative 2 and 3 would be similar. Past actions that may contribute to cumulative effects to invasive weeds in the analysis area include timber harvest, prescribed fire, construction and maintenance of roads, recreation, and grazing within the project area and on adjacent land.

Present management activities on the analysis area include Lower Joseph Creek Restoration Project activities, road maintenance and recreation activities. Areas with ground disturbance can create possible seedbeds for invasive plants. Road maintenance and recreation activities are unlikely to result in cumulative effects.

Foreseeable activities proposed for National Forest System lands on the analysis area are the continuation of road maintenance and dispersed recreation activities. Impacts from these activities are likely to be similar to current activities. Therefore, there is a low risk of cumulative effects with the proposed livestock grazing.

Aquatic and Riparian

Overall, riparian and aquatic resources are in good condition and many of the streambanks are densely vegetated or steep enough to discourage use by cattle. However, in areas where livestock can access streams, grazing may affect riparian and aquatic habitats, which can directly or

indirectly affect fish. Cattle grazing can modify rangeland vegetation, and trample streambanks and wetlands. Loss of vegetation on streambanks due to consumption and trampling may decrease shading, and if extensive enough, contribute to an increase in water temperature. Changes in streambank vegetation can cause instability in stream channels and increase runoff. Grazing also has the potential to cause erosion to upland habitats which can accelerate and increase sediment into streams.

Effects

Grazing can alter aquatic habitat indicators, such as bank stability, width to depth ratio (channel width), fine sediment levels, and water temperatures. Changes to these indicators can alter water quality which can negatively affect fish species.

Under Alternative 1 livestock grazing would be eliminated, this would eliminate areas of streambank instability where the primary cause is from damage from livestock. Elimination of livestock damage would allow for the development of riparian plant communities that would function to stabilize banks and filter sediment that would in turn narrow stream channels (Aquatics BE at 21). In addition, no grazing may help stream temperatures remain lower due to the shading of additional growth of riparian vegetation (including shrubs). Benefits of ceasing livestock grazing in the CERA project area would be most evident in the long-term.

Under Alternative 2 the effects would be the same for the *Lost Cow Allotment* as under Alternative 1 because there would be no grazing.

In the *Cold Springs Allotment* all of the 7.4 miles of spawning habitat for steelhead within this allotment is located on Cottonwood Creek. The majority of Cottonwood Creek experienced a high severity stand replacement burn during the 1988 Teepee Butte Fire which removed much of the riparian vegetation. In addition, a large debris flow event occurred on Cottonwood Creek in the spring of 2017 that incised the channel up to 4 feet damaging riparian shrubs. The event was triggered by a high intensity rainstorm.

Due to these large-scale disturbances (fire and flood), water temps on Cottonwood Creek exceed desired temps of 57 degrees Fahrenheit during the summer, and stream morphology has been altered to a wider channel. Streambanks are now generally unstable as a result of the scouring of streambank vegetation and channel downcutting that occurred during the debris flow event and are likely to become a source of fine sediment in the near future. These effects are not related to grazing.

Alternative 2 includes mitigations to protect steelhead habitat by resting the Lower Cottonwood pasture for a period of 5 years to allow recovery of stabilizing vegetation.

In the *Teepee Elk Allotment* there are about 2.7 miles of spawning habitat for steelhead in Peavine Creek and Broady Creek. Broady Creek is located in a steep narrow canyon and experiences little impacts from cattle use (Aquatics BE at 37). However Peavine Creek is currently experiencing effects from grazing including to stream bank stability, which also results in elevated fine sediments. Under the Alternative 2, mitigation to protect steelhead habitat in Peavine Creek would be construction of a riparian fence, which would greatly reduce impacts to the stream banks and the risk of trampling steelhead redds. Once the fence is constructed, the Elk pasture which contains Peavine Creek could be grazed prior to July 1 which would improve cattle distribution on the allotment.

Under Alternative 3 grazing would be permitted on the *Lost Cow Allotment*. Even though the amount of grazing would be minor (16 head months over 5 months), there would be an increased risk of indirect effects to aquatic and riparian areas on lands adjacent to the Allotment. While there are no streams or springs present on the allotment, there is also no perimeter fencing present to keep cattle on the allotment. As such, there is a risk cattle may move off the allotment in search of water, and could access water in Horse Creek (spawning and rearing habitat for steelhead) on private and/or National Forest System lands adjacent to the allotment or less likely Cache Creek (unoccupied habitat for steelhead).

In the *Cold Springs Allotment* the types of effects on aquatic and riparian habitat and species would be similar to those described under Alternative 2, but the risk of impacts would be greater due to the 40% increase in the number of cow/calf pairs on the allotment due to increased competition for forage. This could also result in more impacts in areas of concentrated use (i.e. adjacent to water sources) and increased wandering by cattle in search for forage.

The Grazing strategy and the effects for the *Teepee Elk Allotment* would be the same as under Alternative 2.

Threatened Fish and their Critical Habitat

Snake River Steelhead[6] are listed as threatened species under the Endangered Species Act (ESA). This species has been documented in the project area during field surveys. See table 3 for a summary of effects determination by alternatives. Design criteria proposed for Alternatives 2 and 3 to protect aquatic resources that influence fish species includes timing limitations (deferment and rest of pastures), and fencing to prevent cattle form impacting Peavine Creek.

Table 3. Summary of effects determination by alternative to ESA listed Steelhead and their critical habitat located within the project area.

Allotments	Alternative 1	Alternatives 2	Alternative 3
Teepee Elk	*No Effect*	*May Affect- Not Likely to Adversely Affect*	*May Affect – Likely to Adversely Affect*
Cold Springs		*May Affect- Not Likely to Adversely Affect*	
Lost Cow		*No Effect*	

Region 6 Sensitive Fish and Aquatic Invertebrate Species

Redband trout[7] are present in the analysis area. Freshwater habitat requirements for redband trout are the same as those for steelhead, therefore the effects to redband trout from proposed activities are the same as those previously disclosed for steelhead. Alternative 1 would have no impact, and

[6] Steelhead are also considered a management indicator species (MIS) for the Wallowa-Whitman National Forest.

[7] Redband Trout are also considered a management indicator species (MIS) for the Wallowa-Whitman National Forest.

Alternatives 2 and 3 may impact individuals or habitat (MIIH) but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species of redband trout. Pacific lamprey is not found in the project area, but habitat occurs, and potential impacts would be the same under the alternatives as for redband trout.

Clean Water Act

The proposed action was found to comply with the Clean Water Act of 1972 because the proposed action is consistent with the Forest Plan, HCNRA CMP and there would be Best Management Practices and temperature monitoring, and watershed restoration projects (e.g. Lower Joseph Restoration Project)(Hydrology Report at 8)).

Cumulative Effects

Since there would be no direct or indirect effects from the proposed activities under Alternative 1, there would be no cumulative effects. Cumulative effects for Alternative 2 and 3 would be similar.

Past management activities in the analysis area include the Teepee Fire (1988) and salvage sale, road construction, and timber harvest activities. Impacts from these activities on riparian/stream habitat are reflected in the existing conditions of riparian and aquatic habitats. These impacts are included in the direct/indirect effects analysis.

Present management activities on the analysis area include Lower Joseph Creek Restoration Project activities, road maintenance and recreation activities. Road maintenance and recreation activities are unlikely to result in cumulative effects with proposed livestock grazing activities do to the limited nature of these activities on the allotment.

Foreseeable activities proposed for National Forest System lands on the analysis area are the continuation of road maintenance and dispersed recreation activities. Impacts from these activities are likely to be similar to current activities. Therefore, there is a low risk of cumulative effects with the proposed livestock grazing.

Essential Fish Habitat (EFH)

There would be no effect to EFH for The Magnuson-Stevens Fishery Conservation and Management Act managed species within the project area because spawning, rearing and migration habitats for Chinook and Coho salmon are not present on the allotment.

Botany

Plants can be affected by livestock grazing when the plants are eaten and from trampling. When plant parts are eaten the loss of tissue may impact the plant's ability to photosynthesize, reproduce, and store energy. Grazing can also uproot entire plants, cattle's hooves can break or remove tissue, and grazing can impact the production of flowers or seeds needed for reproduction.

Effects

Only those botany species and habitats that are likely to experience effects from cattle grazing within the Cold Springs, Teepee Elk and Lost Cow Allotments area included.

Under Alternative 1, livestock grazing would be eliminated in the project area, which would remove the threats of consumption or trampling that can impact the reproductive capability of plants. However, potential impacts from wildlife browsing and trampling would continue.

Under Alternative 2 and 3, while there would be potential impacts to plants from grazing, the design criteria of rest and deferment of pastures would reduce this risk by reducing the time available for livestock to interact with plants and habitat. Potential botany effects under Alternative 3 are expected to be greater than under Alternative 2 on the Cold Spring Allotment because of additional head months and longer grazing season, and on the Lost Cow Allotment due to renewed grazing activity. There is only slightly more risk with the extension of the season of use, because plants are largely dormant during November in this area.

Threatened Plant Species and their Critical Habitat

While suitable habitat for Spalding's catchfly does occur in the analysis area, Spalding's catchfly has not been detected. Most suitable habitat in the analysis area has been inventoried in the past 15 years. Survey efforts and results are presented in detail in the July 2019 Biological Assessment for the Cold Elk Range Analysis Project for effects on Spalding's Catchfly.

Region 6 Sensitive Plant Species[8]

A project area review found three R6 sensitive plant species; green-banded mariposa lily, Engelmann's daisy and, cordilleran sedge. See table 4 for a summary of effects determination of the alternatives to these species. None of the alternatives will result in a trend towards Federal listing or cause a loss of viability to the population or species.

Table 4. Summary of effects determinations to ESA and R-6 listed sensitive plant species located within the project area.

Common name	Alternative 1	Alternative 2 & 3
Spalding's Catchfly* (ESA listed)	*No Effects*	*May Affect- Not Likely to Adversely Affect*
Green-banded mariposa lily (FS Region 6 sensitive)	*No Impact*	*May Impact Individuals or Habitat*
Engelmann's daisy (FS Region 6 sensitive)		
Cordilleran sedge (FS Region 6 sensitive)		

[8] Forest Service R6 Sensitive Plant Species List July 2015 R6 ISSSP list

*Formal Consultation on the above effects determinations with US Fish and Wildlife Servicers was completed on 08/28/2019, per the Endangered Species Act.

Cumulative Effects

Since there would be no direct or indirect effects from the proposed activities under Alternative 1, there would be no cumulative effects.

Cumulative effects for Alternative 2 and 3 would be similar. Past management activities in the analysis area include road construction, and timber harvest activities. Present management activities on the analysis area include Lower Joseph Creek Restoration Project activities, road maintenance, weed management, and recreation activities. Thinning and timber harvest activities include design criteria to avoid these plant sites. Road maintenance and recreation activities are unlikely to result in cumulative effects with proposed livestock grazing activities, because impacts would be incidental.

Foreseeable activities proposed for National Forest System lands on the analysis area are the continuation of road maintenance, weed management, and recreation. Impacts from these activities are likely to be similar to current activities.

Wildlife

Wildlife habitat may be affected by livestock grazing due to the modification and/or trampling of vegetation which could otherwise be used for food/cover, competition for use of water sites, modification in habitat, and greater interaction between domestic and wild species (Wildlife Report).

Effects

Endangered Species Act Listed Wildlife Species

There are no listed threated or endangered species present within the project area.

Region 6 Sensitive Wildlife Species

A project area review found that four R6 sensitive wildlife species have the potential for individuals, or habitat, to be affected by the proposed action. However, the alternatives will not result in Federal listing or cause a trend toward Federal listing. See table 5 for a summary of effects determination for the alternatives to these species.

Table 5. Summary of effects determinations to R-6 listed Sensitive Wildlife Species located within the project area.

Common name of species	Alternative 1	Alternatives 2 and 3
Rocky Mtn. Tailed Frog	*No Impact*	*May Impact Individuals or Habitat*
Columbia Spotted Frog		
Western Bumblebee		
Gray Wolf		

Frogs

Rocky Mountain Tailed Frogs and Columbia Spotted Frogs are both known to occur in the Wallowa Mountains and Hells Canyon. Alternative 1 would result in a *no impact* to Rocky Mountain Tailed Frogs or Columbia Spotted Frogs or their habitat. Under Alternatives 2 and 3, grazing activity in riparian areas that provide suitable habitat could result in an impact to quality of riparian vegetation and its ability to provide shading or limit sedimentation.

Based on the predicted effects under Alternatives 2 and 3 it is determined that grazing *may impact individuals or habitat (MIIH) but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.*

Western Bumblebee

While there is habitat, western bumblebees were not documented in the CERA project area.

The western bumblebee is considered to be a generalist forager and does not rely on only one type of forb for food. Cattle tend to forage more on grasses than forbs and so in areas where forbs are abundant (i.e. large patches) cattle grazing should not affect food availability. In areas where forbs are lacking, the impact would be greater. Bumblebees emerge from hibernation in the spring and this is the most crucial time for the western bumblebees to find food resources. There is also the potential for cattle to directly affect the western bumblebee by trampling active bumblebee nests, though most western bumblebee nests are found below ground or in logs and should be mostly protected.

Alternative 1 would result in *no impact* on western bumblebee or their habitat. Under Alternatives 2 and 3 grazing activity is not expected to have much of an impact on food availability for bumblebees since under the project design criteria cattle would not be turned out into the project area until June 1. Based on the predicted effects of under Alternatives 2 and 3 it is determined that grazing *may impact individuals or habitat (MIIH) but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species*.

Gray Wolf

The Chesnimnus wolf pack is known to be present within the CERA project area (ODFW 2019), though there are no known den or rendezvous sites. There are no documented depredations by wolves on cattle within the project area, nor any lethal actions taken against wolves.

The State of Oregon has recently adopted a comprehensive Wolf Management Plan (June 2019) which was developed with input from relevant stakeholders across the state. The plan describes a variety of tools for minimizing cattle/wolf impacts (pgs. 37-41) and the process and coordination for implementing these tools between permittees and authorizing agencies, such as Oregon Department of Fish and Wildlife. The Forest Service will refer permittees and interested publics to the Wolf Plan as the guiding document for addressing action to minimize cattle/wolf impacts on National Forest System lands.

Alternative 1 would result in a *no impact* on gray wolves or habitat from grazing activity.

Under Alternatives 2 and 3, there would be no direct effects on habitat availability and suitability for the gray wolf because wolves are habitat generalists. Denning or rendezvous sites are not

known to occur in the project area and therefore, there would be no impacts on these habitats. With continued or increased cattle grazing there is a risk of cattle depredation from wolves, and as such the potential for lethal removal of one or more wolves. While this would have a short-term direct effect on local populations it is unlikely to have a long-term effect on the occurrence of wolves in Wallowa County or on the Wallowa-Whitman National Forest. Based on the predicted effects of grazing under Alternatives 2 and 3 it is determined that grazing *may impact individuals or habitat (MIIH) but would not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.*

Management Indicator Species

Habitat for northern goshawk, pileated woodpecker, Rocky Mountain Elk, and primary cavity excavators are present within the project area. The Forest Plan identifies these species as management indicator species. Alternative 1 will have *No Impact*, or *Beneficial Impact* to these species or their habitat. Alternatives 2 and 3 m*ay impact individuals or their habitat but will continue to maintain viable populations* of these species within the Wallowa-Whitman National Forest.

Elk Management

Elk management on the Wallowa-Whitman National Forest is a cooperative effort between the Forest Service and the Oregon Department of Fish and Wildlife.

Management objectives for elk as a game species were developed by the State of Oregon to consider not only the carrying capacity of the land, but also the elk population size that would provide for a harvestable surplus, and the tolerance levels of ranchers, farmers, and other interests that may sometimes compete with elk for forage and space. Biologically, a population that is managed around a game management objective is much larger than a minimum viable population. A minimum viable population represents the smallest population size that can persist over the long term. Currently, elk populations on the Wallowa-Whitman National Forest are regulated by hunting and predation. Elk numbers are substantially higher than what would constitute a concern over species viability. All alternatives, including the existing condition, would provide for elk populations well above a population viability threshold.

Cumulative Effects

Since there would be no direct or indirect effects from the proposed activities under Alternative 1, there would be no cumulative effects. Cumulative effects for Alternative 2 and 3 would be similar.

Past management activities in the analysis area include road construction, and timber harvest activities.

Present management activities on the analysis area include Lower Joseph Creek Restoration Project activities, road maintenance and recreation activities. Road maintenance and recreation activities are unlikely to result in cumulative effects with proposed livestock grazing activities do to the limited nature of these activities on the allotment. While the continued grazing of cattle would interact with these other uses to influence elk distribution and fitness, the population of elk is expected to remain well above management objectives, and therefore not negatively affect the continued viability of the species. Rangeland for cattle and habitat for wolves overlap extensively. Cattle that are predated by wolves can result in the wolves being lethally removed, however it is

unlikely to have a long-term effect on the occurrence of wolves on the in Wallowa County or on the Wallowa-Whitman National Forest.

Foreseeable activities proposed for National Forest System lands on the analysis area are the continuation of road maintenance and dispersed recreation activities. Impacts from these activities are likely to be similar to current activities. Therefore there would be low risk of cumulative effects on wildlife in the project area, and there is not likely to be a loss of viability in the project area, nor cause a trend toward federal listing for any wildlife species.

Heritage

Cattle aggregation and/or movement throughout an archaeological site can cause erosion or compaction, artifact breakage, or physical relocation of artifacts. Cattle can damage the structural integrity of constructed features such as buildings. To comply with Section 106 of the National Historic Preservation Act of 1966 and meet Forest Plan standards and guidelines, the Forest Service will review primary historic records and relevant literature, conduct cultural resource surveys in areas where sites are likely to occur, and protect Historic Properties as defined by National Historic Preservation Act from adverse effects. As of this date, approximately 1,938 acres have been surveyed.

Effects

Alternative 1 would have no effects on heritage resources.

Under Alternatives 2 and 3 design criteria proposed to protect cultural resources include fence construction, to deter cattle from congregating on archaeological sites.

Cumulative Effects

Since there would be no direct or indirect effects from the proposed activities under Alternative 1, there would be no cumulative effects.

Past management activities in the analysis area include road construction, and timber harvest activities.

Present management activities on the analysis area include Lower Joseph Creek Restoration Project activities, road maintenance and recreation activities. Road maintenance and recreation activities are unlikely to result in cumulative effects with proposed livestock grazing activities do to the limited nature of these activities on the allotment.

Foreseeable activities proposed for National Forest System lands on the analysis area are the continuation of road maintenance and dispersed recreation activities. Impacts from these activities are likely to be similar to current activities.

The cumulative impacts to cultural resources relate primarily to the type, amount, and locations of structural improvements (i.e. stock tanks and fences,) stocking rate and season of use by livestock, prescribed burning, and other ground-disturbing activities within the analysis area. The other activities would continue and could affect heritage resources, especially unknown sites. Significant direct, indirect, or cumulative effects to cultural resources are not anticipated by the implementation of the alternatives.

Rural Economy and Culture

The scale at which effects to rural economy and culture was considered is Wallowa County. Forest Service policy directs the agency to "continue contributions to the economic and social well-being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood (FSM 2202.1)". Approximately one third of Wallowa County's economy is based on natural resources (Sorte and Williams, 2006), and an estimated 12% of local employment is based on cattle production (Headwaters Economics 2018).

Effects

Permitting cattle grazing on National Forest System lands in the project area can affect the local rural economy through employment opportunities (direct and indirect support services), economic contribution from the production and sale of beef, and of other marketable goods in support of a cattle operation (hay and other feed, tractors and feeding equipment, medicine, fencing material, trucks and trailers, handling facilities, gas and diesel fuel, salt and minerals) and resilience of the portion of the local rural economy based on natural resources.

Wallowa County is an isolated community, located two hours away from other major communities, and is sparsely populated (University of Oregon 2016). Isolation increases community dependence on activities and opportunities that can be supported locally in the county, such as access to range land and grazing permits (Sorte and Williams 2006). Any contribution of jobs which can be offered in Wallowa County, eliminating the costs to travel to larger communities for employment, is important in this small, rural economy. The study of cattle operations in the Blue Mountains found that 74% of permittees reported their cattle operation was their full time employment, and 40% of these permittees were running multi-generational operations (Charnley et al, 2018).

Agricultural production including ranching is labor intensive and is a source of year-round employment. The Blue Mountain socioeconomic zone, which includes Wallowa County, produces 41% of the beef in Oregon (Charnley at al, 2019), and on average 58% of the livestock spend part of the year on National Forest System allotments, which supply approximately one third of the forage for cattle production.

Permitted grazing can contribute to the economy through livestock purchase and sale (e.g. cattle, ranch horses, working dogs), and the purchase and sale of goods to facilitate production. The end product of cattle production would be beef to the market. Research has found that for each $1 in direct economic impact from livestock, an additional $0.62 in sales is generated outside the agriculture production complex (Nebraska 2018). The average market value of ground beef (the least cost product/cut) from the average cow would be just over $3,000 (USDA ERS, July 2019).

Livestock production through ranching is a traditional activity in Wallowa County and some families have been dependent on this activity for income for many generations. The ranching culture is an important foundation for many of the family and social activities in the County. David Brooks noted that while rural communities in America may not have the affluence and opportunity of urban areas, rural communities can be more cohesive, where families are stronger and healthier, and traditional rural employment is foundational to community resilience (New York Times, 2019).

Permitted grazing on National Forest System lands is an important contributor to the ranching culture in Wallowa County. A reduction in permitted grazing may result in ranchers reducing herd sizes, relying more on private rangelands that could have been used to grow their operations to offset this loss, or terminate their operations (Sorte and Williams, 2006). In the Blue Mountains, Charnley et al (2018) found that 46% of cattle permittees reported they would go out of business if they did not have access to National Forest System grazing lands, and 49% said they would have to sell livestock and reduce the size of their operation. Working ranches are facing rising costs and razor-thin margins (RVCC, 2019).

Under Alternative 1 the current permits for grazing on National Forest System lands would be cancelled, and no grazing would be permitted. This alternative would affect the rural economy and culture by a direct loss of employment associated with the portion on the grazing operations associated with the project area, and an indirect loss of employment associated with the support services discussed above. Under this alternative there is also the potential for a short-term economic gain followed by a long-term economic loss. The economic gain is possible through the sale of the cattle that previously grazed on the allotments and potentially through the possible sale of ranch and equipment necessary for production if the ranch goes out of business. The long-term loss would be from the elimination of associated employment and loss a product to the market. Under this alternative there would also be impacts to the sustainability of the rural cultures and life styles associated with ranching and cattle production.

Under Alternatives 2 and 3, continued grazing would contribute to employment directly and indirectly associated with the portion of the grazing operation on National Forest System lands. As discussed above, any employment supported in the local rural area, especially if the jobs are considered living-wage employment, such as in support of a grazing operation, would be an important contribution of the rural economy of Wallowa County, and would reduce the need for residence to travel out of the area to find employment.

Under the Alternative 2, a total of 608 cows would be supported for a portion of their production on National Forest System lands on the Teepee Elk and Cold Springs Allotments. These cattle have the potential to produce beef at a market value of $1,848,329. Alternative 2's contributions to the rural economy also contribute the sustainability of the ranching culture of Wallowa County.

Similar contributions to local employment, market goods and ranching culture would be expected under Alternative 3, though the contributions would be slightly greater due to the increased number of head months available on the Cold Spring Allotment and to stock the vacant Lost Cow Allotment.

Cumulative Effects

Much of the rivers and streams in Wallowa County support steelhead and salmon habitat. When these species were listed (steelhead in early 1990s and salmon in early 2000s) as threatened under the Endangered Species Act (ESA) extensive limits were placed on activities that could affect stream conditions, which had a negative effect on natural resource employment. Also, in the mid-1990s the Forest Service greatly reduced the acres managed for timber across the west, including in Wallowa County, which resulted in the closure of local saw mills and also reduced natural resource-based job. While employment based on tourism is currently available or increasing in Wallowa County, many of these job are low-paying and not considered living wage jobs. The potential loss of employment under Alternative 1 would be a cumulative negative effect to living-wage jobs in the county. Under Alternative 2 there would be no cumulative effect on

employment, rural culture or value of market products, while under Alternative 3 it is expected there would be a slight positive effect.

Currently, rising costs of owning and managing land in Wallowa County, in step with the trends across the western U.S., reduce the profit margins on a land/natural resource-based economy. This may negatively affect permittees in their ability to successfully finance their base properties for a livestock operation under all alternatives.

Consistency with the Forest Plan and Hells Canyon National Recreation Area Comprehensive Management Plan

This environmental assessment tiers to and incorporates by reference the Wallowa-Whitman National Forest Plan Final Environmental Impact Statement (FEIS) 1990, as amended. The Forest Plan (Chapter 4) provides overall direction to meet desired conditions by identifying management goals and objectives to reflect conditions on the ground.

The Forest Plan management areas are used to guide the management activities that may occur on the forest. The CERA project area falls into six Management Areas (MA), all of these MAs allow for permitted grazing (Forest Plan 4-17):

- MA 1 Timber Production Emphasis (4,484 ac)
- MA 3 Wildlife/Timber Winter Range (100 ac)
- MA 15 Old Growth Preserve (355 ac)

Hells Canyon National Recreation Area (NRA) Comprehensive Management Plan (CMP 2003), amended the Wallowa-Whitman National Forest Plan, and provides guidance for activities within the NRA. The proposed project is located in the following Management Areas:

- MA 9 HCNRA Dispersed Recreation/Timber (8,530 ac)
- MA 10 HCNRA Forage Emphasis (14, 085 ac)
- MA 11 HCNRA Dispersed Recreation/Native Vegetation (11,415 ac)

The proposed action is compatible with the overarching CMP objectives and standards for grasslands and forest understory, grazing and rangeland management, which states:

> *Continue recreation, livestock grazing, timber harvest, and mining as traditional and valid uses of the HCNRA, compatible with sections 7 and 13 of the HCNRA Act so long as these activities are managed to meet the goals, objectives, standards, and guidelines of this plan* (CMP C-6).

In addition, livestock grazing is consistent with the *Hells Canyon National Recreation Area ACT*, which created the Hells Canyon National Recreation Area, and states:

> *Administer the recreation area in a manner compatible with the following objectives; management, utilization and disposal of natural resources on federally owned lands, including but not limited to timber harvest by selective cutting, mining, and grazing and*

> *the continuation of such, existing use and developments as area compatible with provision of the Act* (HCNRA Act Section 7(7)).

Additionally the Act permits:

> *Ranching, grazing, farming, timber harvesting, and the occupation of homes and lands associated therewith, as they exist on the date of enactment of this Act, are recognized as traditional and valid uses of the recreation area* (HCNRA Act Section 7(13)).

In conclusion, the CERA proposal is consistent with the Forest Plan and the CMP standards and guidelines (summarized in the Range Report at 1-4) that provide guidance for proposed activities and management of resource values within the project area. The consistency determination is based on several factors, including 1) Forest Plan direction to make available forage production above that needed for maintenance or improvement of the basic resources to wildlife to permitted domestic livestock; 2) the project design criteria of resting and deferring grazing, and of new fences which mitigate resource effects, particularly within the five focus areas; 3) reduced grazing utilization in pastures rated as unsatisfactory; and 4) years of annual monitoring which demonstrates that use is not exceeding grazing standards.

Agencies or Persons Consulted

The Forest Service consulted the following individuals, Federal, State, tribal, and local agencies during the development of this draft EA:

Baker County

Birkmaier Ranch

BJ Warnock

Cynthia Warnock

Dennis and Marcia Sheehy

Greater Hells Canyon Council

John Williams

Lightning Bolt Cattle Company

Mark and Amy Ramsden

National Marine Fisheries

Natural Resource Conservation Service

The Nature Conservancy

Nez Perce Tribe

Oregon Department of Fish and Wildlife

Oregon Wild

Rock N' J Properties

Rod and Linda Childers

US Fish and Wildlife

US Senator Ron Wyden

Wallowa County Board of Commissioners

Wallowa County Natural Resources Advisory Committee

Wallowa County Stockgrowers Association

Wallowa Land Trust

Wallowa Resources

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